The author explores and identifies possible relationships between the evolution of ERP systems and information systems’ integration or disintegration.

The purpose of this book is to discover whether the relationships between the ERP systems and the information systems are guided by certain factors and, as a result, to better understand the factors affecting these relationships.

More precisely, this analysis studies whether assigned values given to these factors could guide the evolution of ERP systems in a manner that promotes IS integration; and whether the opposite assigned values to these factors could guide the evolution of ERP systems in a manner that provokes IS disintegration instead.

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ERP and Information Systems
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This book written by Tarek Samara gives a relevant overview of the evolution and impact of enterprise resource planning (ERP) on information systems (IS). As he is both a professional ERP expert and a researcher, the author has a deep understanding of what is at stake nowadays in IS strategy. This book might be considered to address a paradox that has rarely been highlighted in the literature. First, it provides the readers with rich insights into the history of ERP and, going back to MRP, explains how the integration process was made possible by enterprise applications. Second, it shows how this evolution of ERP can sometimes eventually lead in itself to IS disintegration. The author does not only explore the paradox, but he also pinpoints the main factors affecting the relationships between the evolution of ERP systems and the integration or disintegration of the IS.

Thus, the author gives us a useful framework. The seven factors identified by the author are the influence of economic crisis and competitiveness on the level of IS investment, the arbitrage made by companies considering the dependency on the ERP vendor, the success or failure of the ERP project management, the interoperability of the ERP with other applications running in the IS, the choice made between two evolution strategies of existing systems (urbanization or total overhaul), the complexity level of ERP and the evolution strategy of ERP vendors such as the expansion scope of ERP perimeter. The author shows how all these factors are crucial and critical for IS management.

The outline of the book is the following. After an introduction, the first chapter describes the research terms. The second chapter deals with ERP trends. The third chapter explains the research question and methodology.
The fourth chapter explores the literature review. The fifth chapter analyzes the relationships between these research factors. In the sixth chapter, the validity of the research question is verified due to three case studies. Chapters 7 and 8 are devoted, respectively, to a discussion (relationships between research factors and the evolution of ERP systems and IS) and research interests and limitations. Finally, a conclusion is given.

The contribution of the book is threefold. First, it offers a unique typology, which gathers all the different possible ERP evolution scenarios, and highlights their impacts on IS integration or disintegration. In this way, this book is an opportunity to take stock of the different available strategies to prevent the IS disintegration.

Second, the book takes into account the main challenges faced by chief information officers (CIOs) and gives us relevant clues to foster rational selection (and purchase) of an ERP package, and improves the success of its implementation. It is definitely a recent topic because of the growing pressure of ERP vendors on their clients, and of the general context of economic crisis that tends to kill a lot of innovative information technology (IT) projects.

Finally, the book’s key quality is to show that the future of ERP system evolution will not be a matter for vendors only. The book refers to the work of Freeman and raises the question of the stakeholders: firms, vendors, consultants, consultancy firms, etc. It is only by involving and taking into account all the stakeholders in the IS governance that solutions can be found. The author posits that stakeholders’ participation is a key point to engage enterprises in a positive IS evolution, and advocates such kinds of corporate policy.

For all these reasons, this book could be not only useful for researchers, teachers and students but also for practitioners and IT professional experts. Its content can provide fruitful insights to anyone who wants to know more about ERP issues and how to address them.

Philippe EYNAUD
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The evolution of enterprise resource planning (ERP) packages and the principal types or degrees of information systems (ISs) integration is to be discussed in this introduction. The factors affecting the relationships between the evolution of ERP packages and the integration or the disintegration of the ISs are also discussed.

After the first expansion, between 1980 and 2000, from “material requirements planning (MRP)” and “manufacturing resource planning (MRP II)” toward “enterprise resource planning (ERP)” considering the modules like production planning, purchasing, manufacturing, sales, distribution, accounting and human resources [ESC 99], a second evolution seems to be in progress. In order to meet the new requirements of users, it is important to take into account the framework of the ERP, new modules like “customer relationship management (CRM)”, e-business, “supply chain management (SCM)”, “product lifecycle management (PLM)”, “business intelligence (BI)”, etc. For the purpose of our research, the package which is the result of the first expansion is termed “ERP 1st Generation (1st G)” and the package that is the result of the second evolution is called “ERP 2nd Generation (2nd G).”

Various authors have written about the degree and the maturity of “information system (IS)” integration. Depending on the architecture’s composition, many degrees or rates of IS integration are present today. Our study draws attention to two principal types or degrees of IS integration: a “total integration of IS (TIIS)” and a “hybrid integration of IS (HIIS)”. Many studies have been conducted on the evolution of IS. This kind of research often analyzes paths of integration from a “disintegrated information system
As an ERP system is an indicator privileging IS integration, its selection and then its implementation by a company (which could be a success or a failure) could also be taken into account as factors that improve (or not) this integration. This study of factors as “critical success factors (CSFs)” and “critical failure factors (CFFs)” permits us to determine the evolution’s trajectory of IS (toward integration or not) and also to analyze the contribution of ERPs in the IS integration. Reasonably, CSF could promote integration while CFF could prevent this integration and could even observe the IS in a state of disintegration.

This book analyzes some of the factors affecting the relationships between the evolution of ERP systems and the integration or the disintegration of the IS. More briefly, this analysis aims to study whether assigned values given to these factors could guide the evolution of ERP systems in a way that promotes IS integration; and if the assigned values opposite to the same factors could guide the evolution of ERP systems in a way that provokes IS disintegration instead.
In spite of the fact that the evolution of ERP systems is developed by vendors, this crucial mission should not be delegated solely to these vendors any more. In the future, all stakeholders (vendors, integrators, consultancy firms, clients, etc.) should be involved in the evolution of ERP systems. The experiences and the useful suggestions of integrators and of consultancy firms, as well as important feedback from clients, should also be considered. Accordingly, this research does not limit the analysis of the evolution of ERP systems to factors that are related only to vendors. The studied factors are:

- “Economic crisis and competitiveness (ECCO)”;
- “Total dependency on the ERP vendor (TDEV)”;
- “Project management ERP (PMER)”;
- “Interoperability of the ERP (INTE)”;
- “Evolution strategy of existing systems (ESES)”;
- “Complexity of ERP (COER)”;
- “Evolution strategy of ERP vendors (ESEV)”.

The principle behind the selection of the seven research factors is as follows:

- “Economic crisis and competitiveness (ECCO)” should be taken into account because of the knowledge that, during a period of economic crisis, firms hesitate to make important and expensive investments. This hesitation could impact the IS integration. “Implementation of ERP systems in many organizations is characterized by troubled multimillion dollar software deals that produce spectacular failures and large spending nightmares” [WAI 09]. Many times in ERP projects, costs exceed budgets [FIS 11, PAN 11, NAU 07]. However, companies can be motivated if a “return on investment (ROI)” calculation shows that buying an ERP system can improve their competitiveness [SHA 00, BAR 02, KAM 08, FED 09]. Therefore, the economic crisis and competitors should be studied together, as this combined factor could be involved in the determination of the IS integration rate. Moreover, competitiveness requires that companies complete the perimeter of their ISs by adding new subsystems: CRM, e-business, SCM, PLM, etc. The successful expansion of the IS’s perimeter depends on the firm’s evolution strategy of its existing systems;